

About the organizers

Tribology is the interdisciplinary science and technology of interacting surfaces in relative motion involving studies in the area of friction, wear and lubrication. Tribology Society of India (TSI), Indian Oil Institute of Petroleum Management (IIPM), Gurgaon and Indian Oil Corporation Limited take a step to bring together academicians, tribologists, practicing engineers in design, operation and R&D professionals to share their knowledge and experiences in this field.

Tribology Society of India (TSI) has its secretariat at Indian Oil R&D Centre, Faridabad and is engaged in a variety of Training & Educational programmes. The society has Members from Oil & Gas, Power, Steel, Cement, Industrial R&Ds and academia from all over the country.

Indian Oil Corporation Limited (IOCL) is India's largest commercial enterprise and company. It accounts for 48% petroleum products market share, 34.8% national refining capacity and 71% petroleum product pipeline capacity in India and a countrywide marketing network. Its world-class R&D Centre has won recognition for its pioneering work in lubricant formulations, refinery processes, pipeline transportation and alternative fuels. To seek growth beyond traditional areas of competence, Indian Oil's business development efforts are now focused on vertical integration – both upwards into Oil exploration & production and downward into petrochemicals – besides diversification into gas marketing and globalization of downstream operations.

IndianOil Institute of Petroleum Management (IIPM) is a fully integrated residential campus for education and training, developed by Indian Oil Corporation Limited (IOCL) as a state-of-the-art resource for in-house programs. The academic block is equipped with classrooms and lecture halls, having latest facilities including audio-visual systems as well as a state of the art Reference Library with more than 15000 Books and Journals. The residential block is furnished with modern living amenities and has in-house dining arrangement. The venue also offers

recreational facilities for the participants including Swimming Pool [Please carry formal Swimming Costume], Gym, and Walking Track etc.

Speakers for Technical Sessions

- Prof D V Singh, Formerly at IIT Roorkee
- Prof. A Sethuramiah, Formerly at IIT, Delhi
- Dr SP Srivastava, Formerly at Indian Oil R&D
- Dr R T Mookken, Indian Oil R&D
- Prof. Satish V Kailas, IISc, Bangalore
- Mr. R Suresh, Indian Oil, Mumbai
- Mr. Srinidhi Dampur, NEI, Jaipur
- Dr Anand Prabhakaran, Tata Steel
- Prof. S C Sharma, IIT Roorkee
- Dr S V Joshi, ARCI, Hyderabad
- Mr. Ajay Kumar, Indian Oil, R&D
- Dr. M B Patel, Indian Oil R&D
- Dr J Bhatia, Envirotech, Mumbai
- Dr. Barun Chakrabarti, L&T, Mumbai
- Dr. K P Naithani, Siddharth Petro Products, Gurgaon
- Mr. Deepak Sharma, Kittiwake Proactive Technologies
- Prof Krishnan Bala, IIT Chennai, and
- Other eminent faculty from Industry / Academia

4th Summer School in

TRIBOLOGY

25–29 June 2012

at
IndianOil Institute of Petroleum
Management, Gurgaon

Organizers



Objectives

Importance of tribology for sustainable reliability cannot be over emphasized. It is reported that loss due to improper understanding and application of tribology is over 1.5% of GDP of the developed countries like USA. We can well imagine the state of affairs in our country, where, awareness about importance, understanding and application of science and technology of tribology is rather low. The engineers coming out of the colleges will be responsible for improving and maintaining the reliability of plants and their equipment. In industry, however, maximum emphasis is given to preventive and breakdown maintenance and tribology is neglected, even though, it is responsible for over 40% of the breakdowns.

It has also been noticed that this important subject of Tribology does not get appropriate coverage in the engineering curriculum in our country. Inappropriate understanding on application of Tribology is one of the major reasons of failures in the industry.

It is with this background that the Tribology Society of India (TSI), the Indian Oil Institute of Petroleum Management, Gurgaon, and Indian Oil R&D Centre are jointly organizing the “4th Summer School in Tribology” from June 25-29, 2012 at IIPM, Gurgaon, to reinforce the need for continued education in Tribology - an interdisciplinary science and technology of friction, wear and lubrication.

The program is intended to provide a National Platform for interaction between renowned tribologists of the country and senior teaching professionals and Tribology practising engineers from Indian industry as participants.

The program will include a one day visit to IOCL R&D Centre, Faridabad.

Who should attend?

- Faculty in Mechanical Engineering/Tribology from Academia
- Practicing Engineers/Managers from Industry working in Plant Maintenance, Technical Services, Marketers of Lubricants/additives and Industrial R&D from sectors like Automotive, Railroad, Oil, Steel, Power, Cement, Engineering and Heavy Machinery etc.

Topics to be covered

Basics of Tribology: Basics of Friction, Wear and Lubrication; Boundary, EHL and Hydrodynamic Lubrication; Wear Mechanisms and Mitigation of Wear by Tribology based Designs, and Coatings for Wear Protection.

Lubrication: Lubricants-different types and their production; Industrial Lubricants and Additives; Automotive lubrication, and Grease lubrication and technology.

Tribology Components and their Lubrication: Rolling Element Bearings; Fluid Film Bearings; Gear Lubrication, and NDT Application in Tribology.

Applied Tribology: Tribo- testing of Lubricants; Analytical Techniques for Tribology; Condition Monitoring through Oil Analysis, and visit to IOC R&D Applied Tribology laboratories at Faridabad.

Special Topics in Tribology: Nano tribology; Bio Tribology; Environmental aspects of lubrication and a Workshop on ‘Tribology Education and Research.

Certificates will be given to all participants.

Important information

Venue IndianOil Institute of Petroleum Management
83, Institutional Area, Sector-18, Gurgaon

Date 25th – 29th June 2012

Fees For participants from Academia

- a) No delegate fee. Lodging and boarding would be provided free of cost. Selected academia participants will also be reimbursed to and fro travel subject to a Maximum of II AC fare.
- b) Further, academia participants selected for the program will be required to submit a refundable cheque of Rs 2500/-, which will be returned when they report for the program. In case of non-participation without notice, this amount will be encashed by TSI to cover administrative expenses incurred
- c) Preference will be given to academia who have not attended previous summer schools in tribology

For participants from Industry:

- (a) Residential: Rs.27,000/- per delegate
- (b) Non-residential: Rs. 19,500/- per delegate

Registration form

Name

Organization

Designation

Contact Address

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Mobile no

Telephone

Email

Brief Bio Data (Please attach file)

Signature of Sponsoring Authority / HOD.....

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Name

Designation

Make cheque / DD favouring ‘Tribology Society of India’ payable at Faridabad.

Mail this form along with the payment at the address given below.

Dr Pankaj Bhatnagar

Sr Mgr & Treasurer, TSI

C/o Indian Oil, R&D Centre

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